

**Abstract**

The circuit element has a first layer composed of an electrically insulating substrate material and a first electrically conductive material which is in the form of at least one discrete area such that it is embedded in the substrate material and/or is applied to the substrate material. Furthermore, it has a second layer having a second electrically conductive material, and a monomolecular layer composed of redox-active bispyridinium molecules, which is arranged between the first layer and the second layer. The bispyridinium molecules are immobilized on the electrically conductive material which is in the form of at least one discrete area, and make electrical contact with the second electrical material of the second layer. Furthermore, electrically inert molecules are immobilized on the first layer, which molecules form a matrix which surrounds the at least one discrete area with the monomolecular layer composed of bispyridinium molecules.

Significant Figure 3c